

Amendment Under 37 CFR § 1.116
Application No. 10/800,630
Attorney Docket No. 042236

REMARKS

Rejections under 35 USC §102(b)

Claims 5 and 9-14 were rejected under 35 USC §102(b) as being anticipated by Farnworth et al (U.S. Patent No. 6,057,597).

Responding to Applicants' previous response, the Examiner alleged as follows:

. . . Farnworth discloses "the cover 20 in a tacked configuration. Should the die 12 be defective, the tacked cover 20 can be easily removed for replacing the die 12". (Col. 5, lines 1-4). Farnworth also discloses "If defective die is located, the cover 20E can easily be removed from ridge 34, such as by slitting the adhesive dots thereby permitting access to the dice 12 E for repair, or replacement. (Col. 6, lines 57-60). Farnworth clearly describes the cover can easily be detached from the semiconductor device.

Claim 5 has been amended to recite, among other things, "an engaging portion to engage the semiconductor device protection cover with the semiconductor device, so as to detachably attach the semiconductor device protection cover to the semiconductor device." Claims 13 and 14 also have been amended to recite "wherein the semiconductor device protection cover has a structure to engage with the semiconductor device so as to be detachably attached to the semiconductor device." According to the present invention, no adhesive or elastomer is required. Farnworth et al describes at the cited portion as follows:

The seal 28 can also be formed in a staged process wherein the cover 20 can be initially tacked to the substrate 14 with a **minimal quantity of adhesive**. For example, dots of adhesive can be applied at the corners of the cover 20. The die 12 can then be tested with the cover 20 in a tacked configuration. Should the die 12 be defective, the

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tacked cover 20 can be easily removed for replacing the die 12. **Once the die 12 is confirmed to be a good die, the remainder of the seal 28 can be formed by applying a continuous bead of adhesive between the cover 20 and substrate 14.**

(Col. 4, line 65 to col. 5, line 7, emphasis added).

The cover is tacked to the substrate 14 with an adhesive and the seal 28 is eventually attached with a continuous bead of adhesive between the cover 20 and substrate 14. The cover 20 does not have a structure to engage with the semiconductor device so as to be detachably attached to the semiconductor device.

Thus, Farnworth et al does not teach or suggest “an engaging portion to engages the semiconductor device protection cover with the semiconductor device, so as to detachably attach the semiconductor device protection cover to the semiconductor device,” as recited in amended claim 5. Also, Farnworth et al does not teach or suggest “wherein the semiconductor device protection cover has a structure to engage with the semiconductor device so as to be detachably attached to the semiconductor device,” as recited in amended claim 13 and 14.

For at least these reasons, claims 5, 13 and 14 patentably distinguish over Farnworth et al. Claims 9-10 and 12 depending from claim 5, patentably distinguish over Farnworth et al, for at least the same reasons.

Rejections under 35 USC §103(a)

Claims 7 and 8 were rejected under 35 USC §103(a) as being obvious over Farnworth et al in view of the remark.

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As discussed above, claims 5, 13 and 14 patentably distinguish over Farnworth et al. Claims 7 and 8, depending from claim 5, patentably distinguish over Farnworth et al for at least the same reasons.

Claims 15-20 were rejected under 35 USC §103(a) as being obvious over Farnworth et al in view of Fukasawa et al (U.S. Patent No. 6,784,542).

As discussed above, claim 14 patentably distinguishes over Farnworth et al. Claims 15-20 directly or indirectly depend from claim 14. Fukasawa et al is cited for allegedly disclosing that the semiconductor device has a first positioning member, and that the semiconductor device protection cover has a second positioning member. Such disclosure, however, does not remedy the deficiencies of Farnworth et al.

For at least these reasons, claims 15-20 patentably distinguish over Farnworth et al and Fukasawa et al.

According to the present invention, the protection member can be temporarily attached during an electric performance test, and can be removed after the test without using adhesive or other additional materials. Moreover, the upper surface of the protection member is a uniformly flat surface having a specified height, and this facilitates application of a desired load. Furthermore, with the height being set to be the same with packages of other products, it is possible to make different devices have compatible size. By providing an engagement member, attachment and detachment can be done easily with precise positioning.

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Due to the above features, the present invention has the following additional advantages, which cannot be obtained by the prior art shown in the references: (1) the height of the cover can be adjusted, and stable electrical connection can be realized; (2) a die mounted on the semiconductor package can be protected while being exposed.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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